


EXHIBIT 8

MODERN
DICTIONARY
of
ELECTRONICS

RUDOLF F. GRAF


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Manager of Special Sales

Butterworth-Heinemann

225 Wildwood Avenue

Woburn, MA 01801-2041

Tel: 781-904-2500

Fax: 781-904-2620

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serial storage — serrated rotor plate

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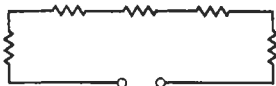
serial storage—1. In a computer, storage in which time is one of the coordinates used in the location of any given bit, character, or word. 2. A storage media organization in which data or text is serially recorded one character or text block after another. Text access points are retrieved by serially searching through the medium (usually a magnetic-tape cassette or cartridge).

serial transfer—Data transfer in which the characters of an element of information are transferred in sequence over a single path.

serial transmission—1. Information transmission in which the characters of a word are transmitted in sequence over a single line. 2. The transmission of a character's bits one at a time (implies a single transmission pathway). 3. A method of transferring information in which the code elements or pulses are sent sequentially, one after another. 4. Moving data in sequence one at a time, as opposed to parallel transmission.

series—1. The connecting of components end to end in a circuit, to provide a single path for the current. 2. An indicated sum of a set of terms in a mathematical expression (e.g., in an alternating or arithmetic series).

series circuit—1. A circuit in which resistances or other components are connected end to end so that the same current flows throughout the circuit. 2. A circuit in which the current has only one path to follow. 3. An electric circuit in which all the receptive devices are arranged in succession, as distinguished from a parallel circuit. The same current flows through each part of the circuit.

*Series circuit.*

series connection—A way of making connections so as to form a series circuit.

series excitation—The field excitation obtained in a motor or generator by allowing the armature current to flow through the field winding.

series-fed vertical antenna—A vertical antenna that is insulated from ground and energized at the base.

series feed—The method by which the dc voltage to the plate or grid of a vacuum tube is applied through the same impedance in which the alternating current flows.

series field—In a machine, the part of the total magnetic flux due to the series winding.

series-gate noise limiter—See noise limiter.

series loading—Loading in which reactances are inserted in series with the conductors of a transmission circuit.

series modulation—Modulation in which the plate circuits of a modulating tube and a modulated amplifier tube are in series with the same plate-voltage supply.

series motor—Also called series-wound motor. A motor in which the field and armature circuits are connected in series. In small motors with laminated field frames, the performance will be similar when operated on direct current or alternating current. For this reason, the series motor is frequently called a universal motor. A series motor has a high starting torque, but its speed varies with the load.

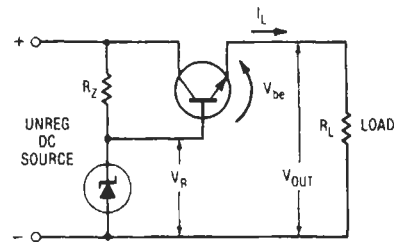
series operation—The connection of two or more power supplies together to obtain an output voltage of the combination equal to the sum of the individual supplies. A common current passes through all the supplies.

series-parallel network—Any network that contains only resistors, inductors, and capacitors and in which successive branches are connected in series and/or in parallel.

series-parallel switch—A switch that changes the connections of lamps or other devices from series to parallel or vice versa.

series peaking network—See peaking network.

series regulator—A device that is placed in series with a source of power and is able to automatically vary its series resistance, thereby controlling the voltage or current output.

*Series-regulated power supply.*

series resistance—Any sum of resistances installed in sequential order within one circuit.

series resistor—A resistor generally used for adapting an instrument so that it will operate on some designated voltage or voltages. It forms an essential part of the voltage circuit and may be either internal or external to the instrument.

series resonance—The condition existing in a circuit when the source of electromotive force is in series with an inductance and capacitance whose reactances cancel each other at the applied frequency, thereby reducing the impedance to minimum.

series-resonant circuit—A circuit in which an inductor and capacitor are connected in series and have values such that the inductive reactance of the inductor will be equal to the capacitive reactance of the capacitor at the desired resonant frequency. At resonance, the current through a series-resonant circuit is at maximum.

series-shunt network—See ladder network.

series T-junction—See E-plane T-junction.

series winding—In a motor or generator, a field winding that carries the same current as the armature; i.e., this winding is in series with the armature rather than in parallel with it. Series-wound motors are used in fractional-horsepower ac-dc applications, such as fans and electric mixers. Their other chief use is in heavy-duty dc traction equipment, such as electric locomotives, because of their extremely high starting torque.

series wound—Characteristic of a generator or motor whose armature and field windings are connected in series.

series-wound motor—A commutator motor with field and armature circuits in series. See also Series motor.

serpentine cut—A trim cut in a film resistor that follows a serpentine or wiggly pattern to effectively increase the resistor length and increase resistance.

serrated pulse—A vertical synchronizing pulse divided into a number of small pulses, each acting for the duration of half a line in a television system.

serrated rotor plate—Also called a slotted or split rotor plate. A rotor plate with radial slots that permit different sections of the plate to be bent inward or outward